#2

OIPE

RAW SEQUENCE LISTING

DATE: 08/13/2001 TIME: 10:53:25

PATENT APPLICATION: US/09/921,143

Input Set : A:\PF112P6seqList.txt

Output Set: N:\CRF3\08132001\1921143.raw

ENTERED

3 <110> APPLICANT: Coleman, Timothy 5 <120> TITLE OF INVENTION: Vascular Endothelial Growth Factor-2 7 <130> FILE REFERENCE: PF112P6 C--> 9 <140 > CURRENT APPLICATION NUMBER: US/09/921,143 C--> 9 <141> CURRENT FILING DATE: 2001-08-03 9 <150> PRIOR APPLICATION NUMBER: 60/223,276 10 <151> PRIOR FILING DATE: 2000-08-04 12 <160> NUMBER OF SEQ ID NOS: 36 14 <170> SOFTWARE: PatentIn version 3.0 16 <210> SEQ ID NO: 1 17 <211> LENGTH: 1674 18 <212> TYPE: DNA 19 <213> ORGANISM: homo sapiens 21 <400> SEQUENCE: 1 22 gtccttccac catgcactcg ctgggcttct tctctgtggc gtgttctctg ctcgccgctg 60 24 egetgetece gggteetege gaggegeeeg eegeegeege egeettegag teeggaeteg 120 26 acctetegga egeggageee gaegegggeg aggeeaegge ttatgeaage aaagatetgg 180 28 aggagcagtt acggtctgtg tccagtgtag atgaactcat gactgtactc tacccagaat 240 30 attggaaaat gtacaagtgt cagctaagga aaggaggctg gcaacataac agagaacagg 300 32 ccaacctcaa ctcaaggaca gaagagacta taaaatttgc tgcagcacat tataatacag 360 34 agatettgaa aagtattgat aatgagtgga gaaagaetea atgeatgeea egggaggtgt 420 36 gtatagatgt ggggaaggag tttggagtcg cgacaaacac cttctttaaa cctccatgtg 480 38 tgtccgtcta cagatgtggg ggttgctgca atagtgaggg gctgcagtgc atgaacacca 540 40 gcacgageta ceteageaag aegttatttg aaattacagt geetetetet caaggeeeca 600 42 aaccagtaac aatcagtttt gccaatcaca cttcctgccg atgcatgtct aaactggatg 660 44 tttacagaca agttcattcc attattagac gttccctgcc agcaacacta ccacagtgtc 720 46 aggcagcgaa caagacctgc cccaccaatt acatgtggaa taatcacatc tgcagatgcc 780 48 tggctcagga agattttatg ttttcctcgg atgctggaga tgactcaaca gatggattcc 840 50 atgacatctg tggaccaaac aaggagctgg atgaagagac ctgtcagtgt gtctgcagag 900 52 cggggcttcg gcctgccagc tgtggacccc acaaagaact agacagaaac tcatgccagt 960 54 gtgtctgtaa aaacaaactc ttccccagcc aatgtggggc caaccgagaa tttgatgaaa 1020 56 acacatgeca gtgtgtatgt aaaagaacct geeecagaaa teaacceeta aateetggaa 1080 58 aatgtgcctg tgaatgtaca gaaagtccac agaaatgctt gttaaaagga aagaagttcc 1140 60 accaccaaac atgcagctgt tacagacggc catgtacgaa ccgccagaag gcttgtgagc 1200 62 caggattttc atatagtgaa gaagtgtgtc gttgtgtccc ttcatattgg caaagaccac 1260 64 aaatgagcta agattgtact gttttccagt tcatcgattt tctattatgg aaaactgtgt 1320 66 tgccacagta gaactgtctg tgaacagaga gacccttgtg ggtccatgct aacaaagaca 1380 68 aaagtetgte titeetgaae eatgtggata aetitaeaga aatggaetgg ageteatetg 1440 70 caaaaggeet ettgtaaaga etggttttet geeaatgaee aaacageeaa gatttteete 1500 72 ttgtgatttc tttaaaagaa tgactatata atttatttcc actaaaaata ttgtttctgc 1560 74 attcattttt atagcaacaa caattggtaa aactcactgt gatcaatatt tttatatcat 1620 1674 79 <210> SEQ ID NO: 2 80 <211> LENGTH: 419 81 <212> TYPE: PRT 82 <213> ORGANISM: homo sapiens

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86 87	Met 1	His	Ser	Leu	Gly 5	Phe	Phe	Ser	Val	Ala 10	Cys	Ser	Leu	Leu	Ala 15	Ala
89 90	Ala	Leu	Leu	Pro 20	Gly	Pro	Arg	Glu	Ala 25		Ala	Ala	Ala	Ala 30	Ala	Phe
92 93	Glu	Ser	Gly 35	Leu	Asp	Leu	Ser	Asp 40	Ala	Glu	Pro	Asp	Ala 45		Glu	Ala
96	Thr	50					55					60				
99	Ser 65					70					75					80
102	2				85					90					95	Gln
105	5			100	ı				105					110		Ala
108	}		115					120					125			Lys
111	-	130					135					140				Phe
114	145					150					155					Tyr 160
117					165					170					175	Thr
120				180					185					190		Leu
123			195					200					205			Ser
126	Ile	210					215					220				
129	225 Lys					230					235					240
132	Leu				245					250					255	
135	Thr			260					265					270		
T38	Glu		275					280					285			
141	Gly	290					295					300				
144	305 Asn					310					315					320
147	Asn				325					330					335	
150				340			Ala		345					350		
153	LC G									_						
	Cys		355					360	His				365 Cys			

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177 gaaaggagge tggcaacata acagagaaca ggccaacete aactcaagga cagaagagac	180
179 tataaaattt gctgcagcac attataatac agagatcttg aaaagtattg ataatgagtg	240
181 gagaaagact caatgcatgc cacgggaggt gtgtatagat gtggggaagg agtttggagt	300
183 cgcgacaaac accttcttta aacctccatg tgtgtccgtc tacagatgtg ggggttgctg	360
185 caatagigag gggcigcagi gcaigaacac cagcacgagc taccicagca agacgitait	420
187 tgaaattaca gtgcctctct ctcaaggccc caaaccagta acaatcagtt ttgccaatca	480
189 cactteetge egatgeatgt etaaaetgga tgtttaeaga caagtteatt ceattattag	540
191 acgitectig ccagcaacac taccacagig tcaggcageg aacaagacci gccccaccaa	600
193 ttacatgtgg aataatcaca tetgeagatg cetggeteag gaagatttta tgtttteete	660
195 ggatgetgga gatgaeteaa eagatggatt eeatgaeate tgtggaeeaa acaaggaget	720
197 ggatgaagag acctgtcagt gtgtctqcaq aqcqqqqctt cgqcctqcca gctgtggacc	780
199 ccacaaagaa ctagacagaa actcatgcca gtgtgtctgt aaaaacaaac tcttccccag	840
201 ccaatgtggg gccaaccgag aatttgatga aaacacatgc cagtgtgtat gtaaaagaac	900
203 ctgccccaga aatcaacccc taaatcctgg aaaatgtgcc tgtgaatgta cagaaagtcc	960
205 acagaaatgc ttgttaaaag gaaagaagtt ccaccaccaa acatgcagct gttacagacg	1020
207 gccatgtacg aaccgccaga aggcttgtga gccaggattt tcatatagtg aagaagtgtg	1080
209 tcgttgtgtc ccttcatatt ggcaaagacc acaaatgagc taagattgta ctgttttcca	1140
211 gttcatcgat tttctattat ggaaaactgt gttgccacag tagaactgtc tgtgaacaga	1200
213 gagaccettg tgggtccatg ctaacaaaga caaaagtctg tettteetga accatgtgga	1260
215 taactttaca gaaatggact ggagctcatc tgcaaaaggc ctcttgtaaa gactggtttt	1320
217 ctgccaatga ccaaacagcc aagattttcc tcttgtgatt tctttaaaag aatgactata 219 taatttattt ccactaaaaa tattgtttct gcattcattt ttatagcaac aacaattggt	1380
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237 20 25 30	
239 Arg Thr Glu Glu Thr Ile Lys Phe Ala Ala Ala His Tyr Asn Thr Glu	
240 35 40 45	
242 Ile Leu Lys Ser Ile Asp Asn Glu Trp Arg Lys Thr Gln Cys Met Pro	
243 50 55 60	
245 Arg Glu Val Cys Ile Asp Val Gly Lys Glu Phe Gly Val Ala Thr Asn	

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	65					70					75					80
248	Thr	Phe	Phe	Lys	Pro	Pro	Cys	: Val	. Ser	· Val	. Tyr	` Arg	Суз	Gly	Gly	Cys
249	)				85					90					95	_
251	Cys	Asn	Ser	Glu	Gly	Leu	Gln	Cvs	Met	. Asr	Thr	Ser	Thr	Ser	Tvr	Leu
252				100	-			4	105	i			~	110		LCu
254	Ser	Lvs	Thr			Glu	Tlo	Thr				Cox			. D	Lys
255		-10	115	шси		. Gru	. 110	100	vai	. PIC	, rea	ser			Pro	гуѕ
		37.5.7				. ni		120			_		125			
25/	PIO	Val	THE	тте	ser	Pne	Ala	Asn	Hls	Thr	Ser			Cys	Met	Ser
258		130					135					140				
260	Lys	Leu	Asp	Val	Tyr	Arg	Gln	Val	His	Ser	lle	Ile	Arg	Arg	Ser	Leu
261	145					150					155					160
263	Pro	Ala	Thr	Leu	Pro	Gln	Cys	Gln	Ala	Ala	Asn	Lvs	Thr	Cvs	Pro	Thr
264					165		_			170				-1-	175	
266	Asn	Tvr	Met	Trp	Asn	Asn	His	Tle	Cvc			Lau	λla	Cln	Clu	) an
267		-		180				110	185		Cys	пец	міа		GIU	ASP
		Mot	Dho			A on	717	C1			G	m1		190	_,	•
270	rne	Met	Phe	ser	361	ASP	Ата			Asp	Ser	Thr			Phe	His
		- 1	195					200					205			
2/2	Asp	He	Cys	Gly	Pro	Asn	Lys	Glu	Leu	Asp	Glu	Glu	Thr	Cys	Gln	Cys
273		210					215					220				
275	Val	Cys	Arg	Ala	Gly	Leu	Arg	Pro	Ala	Ser	Cys	Gly	Pro	His	Lvs	Glu
276	225					230	_				235	-				240
278	Leu	Asp	Arg	Asn	Ser	Cvs	Gln	Cvs	Va 1	Cvs		Δen	T.v.e	Lou	Dho	Dro
279		-	,		245	-1-		015	,	250	<b>L</b> 75	non	шуз	пеа	255	PIO
	Ser	Gln	Cve	Glw		λan	7 ~~	C1	Dha		<b>a</b> 1	3	m1.		255	_
282	DCI	OIII	Cys	260	Ата	ASII	Arg	Glu	265	Asp	GIU	ASn	Thr		GIN	Cys
	Wa 1	0	T		m1	~	_	_	265					270		
204	Val	Cys	Lys	Arg	Thr	Cys	Pro		Asn	GIn	Pro	Leu		Pro	Gly	Lys
285	_		275	_				280					285			
287	Cys	Ala	Cys	Glu	Cys	$\mathtt{Thr}$	Glu	Ser	Pro	Gln	Lys	Cys	Leu	Leu	Lys	Gly
288		290					295					300				
290	Lys	Lys	Phe	His	His	Gln	Thr	Cys	Ser	Cys	Tyr	Arg	Ara	Pro	Cvs	Thr
291	305					310		-		-	315	,	5		0,10	320
293	Asn	Arq	Gln	Lvs	Ala		Glu	Pro	Glv	Dho		Тυν	Sor	Clu	C1.,	V21
294		,			325	-1-			011	330	DCL	- y -	Det	GLu		Val
296	Cvs	Ara	Cys	Val		Sor	Фът∽	Фrn	Cln		Dwo	<i>α</i> 1	14-4	<b>G</b>	335	
297	010	**** 9	C <b>7</b> S	340	110	Ser	тут	ттþ		Arg	PIO	GIU	мет			
	~21 <i>0</i>	\			_				345					350		
			EQ II													
			ENGTH		.1											
			PE:													
302	<213	> OF	RGANI	SM:	homo	sap	iens	3								
304	< 400	> SE	QUEN	ICE:	5											
			Thr			Cvs	Leu	Leu	Leu	Len	Glv	Cvs	Glv	Туг	T.011	λla
307	1	-			5					10	021	O <sub>I</sub> B	O-1	111	15	ліц
		Va 1	Leu	Δla	Glu	Glu	λΊэ	Clu	т10		7 ~~	C1	37- 3	<b>-1</b> -	13	
310		,	LCu	20	Olu	Glu	ΑΙα	Giu		PIO	Arg	GIU	val		GIU	Arg
	Lou	7 1 a	7 m~		<b>01</b>	т1-	TT 2 -	<b>a</b> -	25	_	_	_		30		
212	пeп	ura	Arg	ser	GTII	тте	HIS	ser	TTE	Arg	Asp			Arg	Leu	Leu
313	<b>a</b> 1	- 1	35	_		_		40					45			
315	GLU	тте	Asp	Ser	Val	Gly	Ser	Glu	Asp	Ser	Leu	Asp	Thr	Ser	Leu	Arg
316		50					55					60				
318	Ala	His	Gly	Val	His	Ala	Thr	Lys	His	Val	Pro	Glu	Lys	Ara	Pro	Leu
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319	65					70					75					80
		Ile	Δτα	Δνα	Luc		Sar	Tlo	Clu	Clu		Val	Dro	λla	Wa 1	
322		116	Arg	ALG	85	ALY	SET	TIE	GIU	90	ALG	val	PIO	на	95	Cys
		Thr	Δτα	Thr		τlΔ	ጥ፣ረጉ	Glu	Tlo		λνα	Sor	Cln	Ua l		Dro
325		1111	AIG	100	Val	116	TÄT	Giu	105	PIU	ALG	ser	GIII		ASP	PIO
		Cor	712		Dha	Lou	Tla	m ~~		Dmo	C	17.01	c1	110	T	<b>3</b>
328		Ser	115	ASII	PHE	пеп	TTE		PIO	PIO	Cys	Val		Val	гуѕ	Arg
		шьт		C	C	3	m 1	120	<b>a</b>	77-7	<b>T</b>	<b>a</b>	125	<b>5</b>	<b>a</b>	
		Thr	СТА	Cys	Cys	ASI		ser	ser	vaı	гаг		GIN	Pro	ser	Arg
331		130	77.2		<b>a</b>	**- 1	135			_		140	_		_	_
		His	HlS	Arg	ser		Lys	Val	Ala	Lys		Glu	Tyr	Val	Arg	
	145	_	_	_	_	150			•	_	155					160
	Lys	Pro	Lys	Leu		Glu	Val	Gln	Val		Leu	Glu	Glu	His		Glu
337					165	_				170					175	
	Cys	Ala	Cys		Thr	Thr	Ser	Leu	Asn	Pro	Asp	Tyr	Arg	Glu	Glu	Asp
340				180					185					190		
342	Thr	Gly	Arg	Pro	Arg	Glu	Ser	Gly	Lys	Lys	Arg	Lys	Arg	Lys	Arg	Leu
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358	Leu	Val	Ser	Ala	Glu	Gly	Asp	Pro	Ile	Pro	Glu	Glu	Leu	Tyr	Glu	Met
359				20		•	•		25					30		
361	Leu	Ser	Asp	His	Ser	Ile	Arq	Ser	Phe	Asp	Asp	Leu	Gln	Arq	Leu	Leu
362			35				_	40		-	-		45	,		
364	His	Gly	Asp	Pro	Gly	Glu	Glu	Asp	Gly	Ala	Glu	Leu	Asp	Leu	Asn	Met
365		50	•		_		55	-	. 1			60				
367	Thr	Arg	Ser	His	Ser	Glv	Glv	Glu	Leu	Glu	Ser		Αla	Ara	Glv	Ara
368		,				70	1				75			5	0-1	80
370	Arq	Ser	Leu	Glv	Ser	Leu	Thr	Ile	Ala	Glu		Ala	Met	Tle	Ala	
371	5			1	85					90					95	0
	Cvs	Lys	Thr	Arσ		Glu	Val	Phe	Glu		Ser	Δrσ	Δrσ	L.611		Δen
374	010	270		100		Olu	· u _	1 110	105	110	DCI	1119	111 9	110	110	пор
	Ara	Thr	Asn		Asn	Dhe	T.eu	Val		Pro	Dro	Cve	Val		Val	Gln
377	1119	1111	115	niu	non	riic	пси	120	ııp	FIO	FIO	СуЗ	125	GIU	Val	GIII
	Δra	Cys		C1v	Cve	Cvc	λan		λκα	λcn	Val	Cln		λrα	Dro	Πh.r.
380	Arg	130	Set	СТУ	Cys	Cys	135	ASII	AIG	ASII	vai		Cys	AIG	PIO	1111
	Cln		Cln	T 011	7 ~~	Dwo		C1 n	1701	7	T	140	α1	т1.	77 m 1	7
		Val	GIII	Leu	Arg		val	GIII	vaı	Arg		rre	GIU	ше	vaı	_
383		T •	Dwa	<b>T</b> ]_	nk -	150	T	n 1 -	m la	77_ 7	155	<b>+</b> -	<b>a</b> 1		TT .	160
	гуя	Lys	LT.O	тте		гÀг	гĀ2	Αта	THI		ınr	ьeu	GIU	Asp		ьeu
386	a 7 -	G	T	<b>G</b>	165	m t	**- 3			170	_	_		1	175	
388													1/ n l	III h w	^~~	ピヘア
200	АІа	Cys	пуз		GIU	TIIT	Val	ніа		Ата	AIG	PIO	vaı		AIG	261
389		Gly		180					185					190	_	

VERIFICATION SUMMARY

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L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:483 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8